Shiv Patel

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Education

McMaster University **Hamilton, Ontario**

Bachelor of Engineering (B.Eng), Software Engineering Co-Op *Sept. 2023 - Apr. 2027 (Expected)*

- Relevant Courses: Design Projects in Engineering, Elementary Linear Algebra, Artificial Intelligence - Innovative Technologies, Engineering Math I, II
- Clubs & Teams: MacEng Ambassador & Tour Guide, McMaster Intramural League, Gujarati Students Association, DeltaHacks X (Hackathon Participant)

Technical Skills

Languages: Python, HTML/CSS, JavaScript, MATLAB, Java, Swift, LaTeX
Technologies: React.js
Tools: Figma, GitHub, VS Code, Microsoft Office (Excel, Teams, Outlook), AnsysGranta, AutoCAD)
Certifications/Training: WHMIS Trained

Projects

Lurnius **Jan. 2024**

Python, React, SQL, TypeScript, Next.js, Node.js, Express.js, Figma *Hackathon Project*

- **Collaborated with Yax Patel, Peter Yang, and Sharvin Soosaipillai**
- Designed a **responsive frontend using Next.js, React, and TypeScript**, optimized through **Figma prototypes**, to facilitate community engagement with an intuitive interface for voting and commenting on resources.
- Leveraged **Cohere's large language models** to automate the curation and classification of educational resources, enhancing personalized content delivery on a web-based interface.
- Developed a **scalable backend with Node.js, Express, and TypeScript**, integrating **PlanetScale's MySQL-compatible database** for efficient data management and user interaction.
- Integrated **Google YouTube and Books APIs** along with the **Open Educational Resources (OER) API** to dynamically source a diverse range of learning materials, maintaining content relevance and freshness.

System For Sorting and Recycling Containers **Jan. 2024 – Feb. 2024**

Python, Quanser Technology *Academic Project*

- Developed a System for Sorting and Recycling Containers using **Python and Quanser Technology**.
- Designed **algorithms** to identify and sort containers based on predefined criteria.
- Integrated Quanser Technology for precise control of **robotic arms and sensors**.
- Collaborated with a multidisciplinary team to deliver an efficient waste management solution.
- **Collaborated with a modeling sub-team** to incorporate their proposed gear mechanism for enhancing container sorting and recycling efficiency.

Battleship **May 2023 – June 2023**

Python *Personal Project*

- Developed a classic Battleship game entirely in **Python**, featuring an engaging **User vs AI gameplay experience**.
- Added unique functionalities allowing users to simulate specific outcomes: enabling forced wins, draws, or losses for testing and demonstration purposes.
- **Integrated file I/O operations** to store and **display recent play results using .txt files**, enhancing user experience and maintaining a historical record of gameplay.
- Utilized **object-oriented programming principles** to ensure modular and maintainable code, enabling easy expansion and future enhancements to the game.

Work Experience

McMaster University Housing & Conference Services **April 2024 - Present**

Residence Life Staff - Community Advisor *Hybrid*

- Develop interactive activities to promote personal dignity and mutual respect within the assigned community area.
- Ensure the physical, mental, and social safety of all participants, promptly reporting any issues to supervisors.
- Maintain confidentiality while liaising with internal stakeholders on student services matters.
- Conduct regular rounds of residence buildings, promoting staff engagement and community standards through the coordination of initiatives and events.

Toronto District School Board (TDSB) **Mar. 2022 – June 2022**

Math Tutor *Hybrid*

- Implement personalized tutoring sessions tailored to each student's needs, covering topics from grade 9 to grade 12 Ontario curriculum.
- Utilize hybrid teaching methods incorporating both online resources and in-person sessions to maximize learning outcomes and accommodate diverse learning styles.
- Track student progress through regular assessments and evaluations, aiming for a **minimum grade increase of 10% on tests** and a **cumulative course grade increase of at least 15%** over the tutoring period.
- Provide additional support and resources to strengthen fundamental math skills, ensuring students develop a solid foundation for more advanced topics.